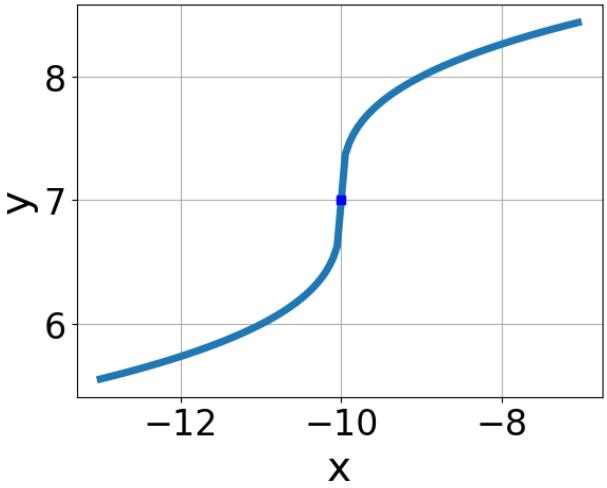
1. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x - 10} + 7$

B. $f(x) = -\sqrt{x - 10} + 7$

C. $f(x) = -\sqrt{x + 10} + 7$

D. $f(x) = \sqrt{x + 10} + 7$

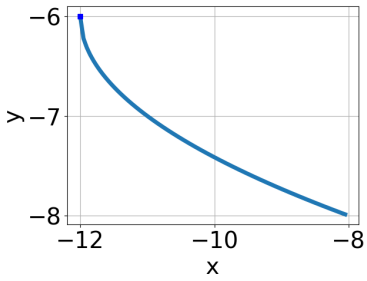
E. None of the above

---

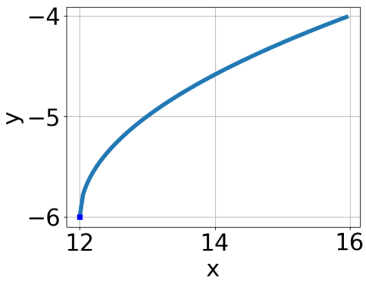
2. Choose the graph of the equation below.

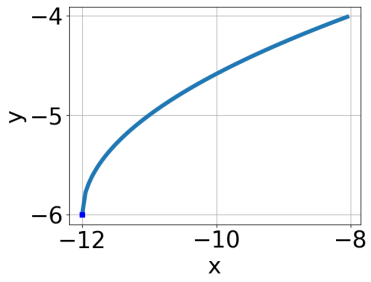
$$f(x) = -\sqrt{x - 12} - 6$$

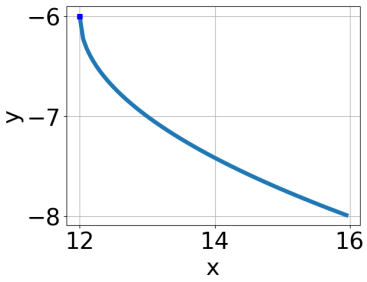
A.



B.



C. 

D. 

E. None of the above.

---

3. What is the domain of the function below?

$$f(x) = \sqrt[8]{-4x - 5}$$

A. $(-\infty, a]$, where $a \in [-3.4, -1.1]$

B. $(-\infty, a]$, where $a \in [-1.1, 1.3]$

C. $(-\infty, \infty)$

D. $[a, \infty)$, where $a \in [-3.4, -1]$

E. $[a, \infty)$, where $a \in [-1.2, -0.3]$

---

4. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{54x^2 + 56} - \sqrt{-111x} = 0$$

A. $x_1 \in [0.68, 1.17]$ and $x_2 \in [0.6, 2.5]$

B. $x \in [-1.4, -1.13]$

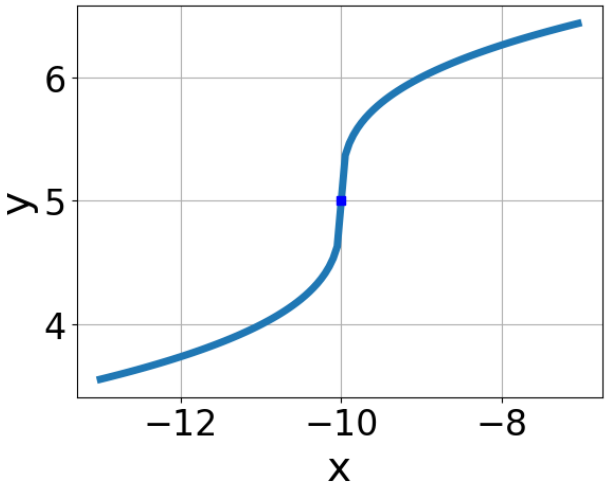
C. $x_1 \in [-1.4, -1.13]$ and $x_2 \in [-1.2, -0.7]$

D. All solutions lead to invalid or complex values in the equation.

E. $x \in [-0.96, -0.86]$

---

5. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x-10}+5$

B. $f(x) = -\sqrt[3]{x+10}+5$

C. $f(x) = \sqrt[3]{x+10}+5$

D. $f(x) = -\sqrt[3]{x-10}+5$

E. None of the above

---

6. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-5x+3} - \sqrt{-2x-8} = 0$$

A. $x_1 \in [-1.3, 1.9]$ and $x_2 \in [2.67, 6.67]$

B. All solutions lead to invalid or complex values in the equation.

C. $x \in [-3.5, -0.8]$

D. $x \in [3, 4.1]$

E. $x_1 \in [-5.8, -3.9]$ and $x_2 \in [-1.4, 3.6]$

---

7. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{6x^2-16} - \sqrt{4x} = 0$$

A. $x_1 \in [-1.44, -1.16]$ and $x_2 \in [-5, 3]$

B. $x \in [-1.44, -1.16]$

C. $x_1 \in [0.82, 1.38]$ and $x_2 \in [-5, 3]$

D. All solutions lead to invalid or complex values in the equation.

E. $x \in [1.48, 2.32]$

---

8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{7x-5} - \sqrt{8x+5} = 0$$

A. $x_1 \in [-1.1, -0.15]$ and $x_2 \in [-1.29, 1.71]$

B. $x_1 \in [-10.3, -9.84]$ and $x_2 \in [-1.29, 1.71]$

C. $x \in [-10.3, -9.84]$

D. All solutions lead to invalid or complex values in the equation.

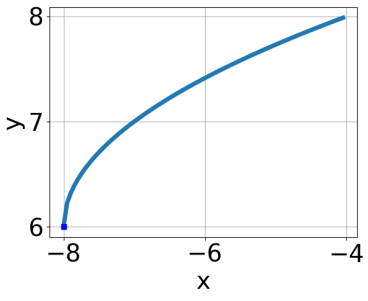
E. $x \in [-0.29, 0.45]$

---

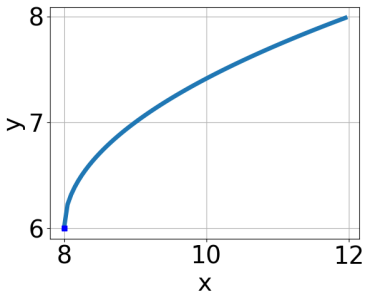
9. Choose the graph of the equation below.

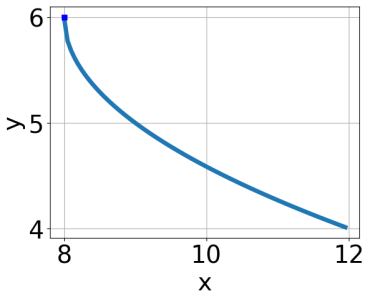
$$f(x) = \sqrt{x+8} + 6$$

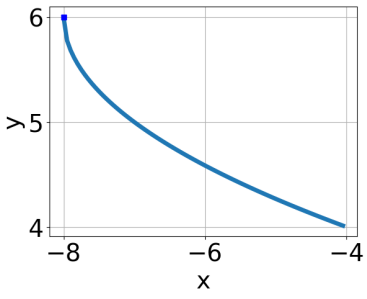
A.



B.



C. 

D. 

E. None of the above.

---

10. What is the domain of the function below?

$$f(x) = \sqrt[4]{7x - 8}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [1.1, 1.45]$

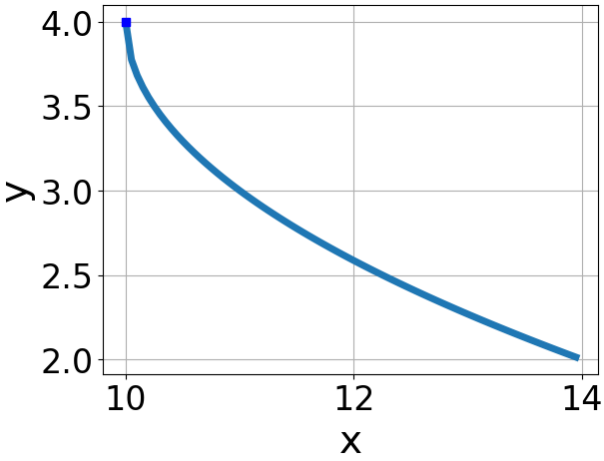
C. $[a, \infty)$, where $a \in [1.07, 1.19]$

D. $[a, \infty)$, where $a \in [0.7, 1.05]$

E. $(-\infty, a]$, where $a \in [0.37, 1.01]$

---

11. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x - 10} + 4$

B. $f(x) = \sqrt[3]{x - 10} + 4$

C. $f(x) = \sqrt[3]{x+10} + 4$

D. $f(x) = -\sqrt[3]{x+10} + 4$

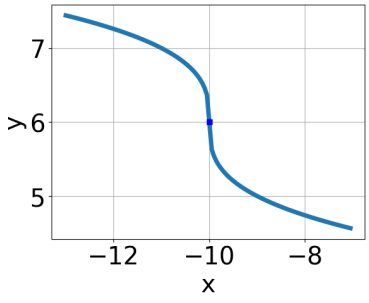
E. None of the above

---

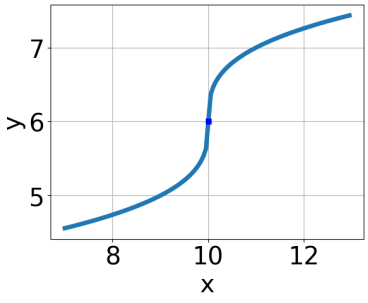
12. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x-10} + 6$$

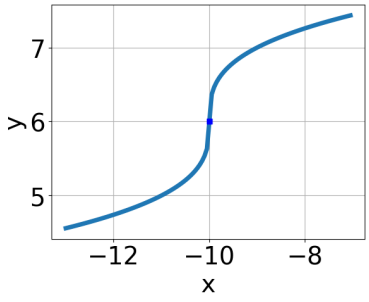
A.



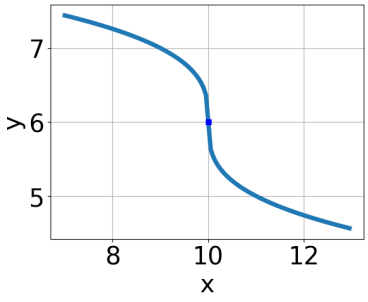
C.



B.



D.



E. None of the above.

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13. What is the domain of the function below?

$$f(x) = \sqrt[6]{5x+9}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [-4.5, -0.8]$

C. $(-\infty, a]$, where $a \in [-0.7, 0.6]$

D. $[a, \infty)$, where $a \in [-3.04, -0.59]$

E. $[a, \infty)$, where $a \in [-1.36, 0.62]$

14. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{32x^2+24}-\sqrt{-76x}=0$$

A. $x \in [-1.81, -0.27]$

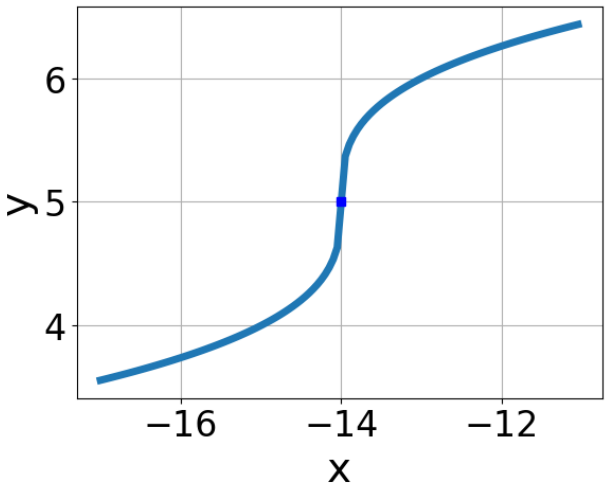
B. $x_1 \in [-0.14, 0.63]$ and $x_2 \in [0.4, 3.9]$

C. $x_1 \in [-2.1, -1.51]$ and $x_2 \in [-1.1, 0.2]$

D. $x \in [-2.1, -1.51]$

E. All solutions lead to invalid or complex values in the equation.

15. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x+14}+5$

B. $f(x) = -\sqrt{x-14}+5$

C. $f(x) = -\sqrt{x+14}+5$

D. $f(x) = \sqrt{x-14}+5$

E. None of the above

16. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-6x-7}-\sqrt{-3x+7}=0$$

A. $x_1 \in [-4.17, -0.17]$ and $x_2 \in [2.33, 5.33]$

B. $x \in [-0, 1]$

C. $x \in [-5.67, -1.67]$

D. $x_1 \in [-5.67, -1.67]$ and $x_2 \in [-1.17, 1.83]$

E. All solutions lead to invalid or complex values in the equation.

---

17. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-48x^2-9}-\sqrt{-42x}=0$$

A. $x \in [0.46, 0.53]$

B. $x_1 \in [0.36, 0.41]$ and $x_2 \in [-0.38, 1.8]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [0.36, 0.41]$

E. $x_1 \in [-0.55, -0.35]$ and $x_2 \in [-1.34, -0.02]$

---

18. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-8x-6}-\sqrt{7x-7}=0$$

A. $x_1 \in [-0.78, -0.75]$ and $x_2 \in [0.83, 1.87]$

B. $x \in [-0.93, -0.76]$

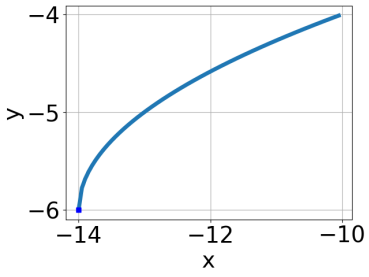
C. All solutions lead to invalid or complex values in the equation.

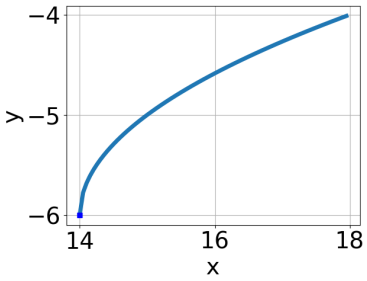
D. $x \in [0.01, 0.41]$

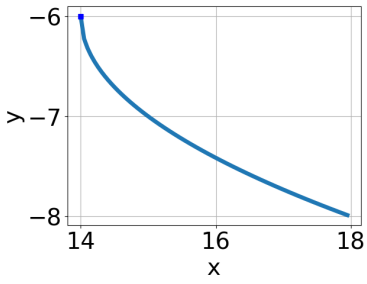
E. $x_1 \in [-0.78, -0.75]$ and $x_2 \in [-0.84, 0.73]$

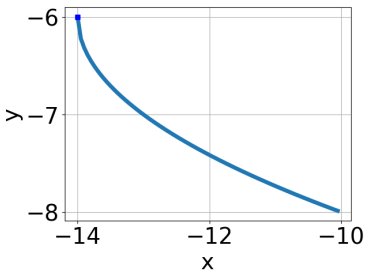
19. Choose the graph of the equation below.

$$f(x) = \sqrt{x + 14} - 6$$

A. 

C. 

B. 

D. 

E. None of the above.

20. What is the domain of the function below?

$$f(x) = \sqrt[3]{5x - 7}$$

A. $(-\infty, \infty)$

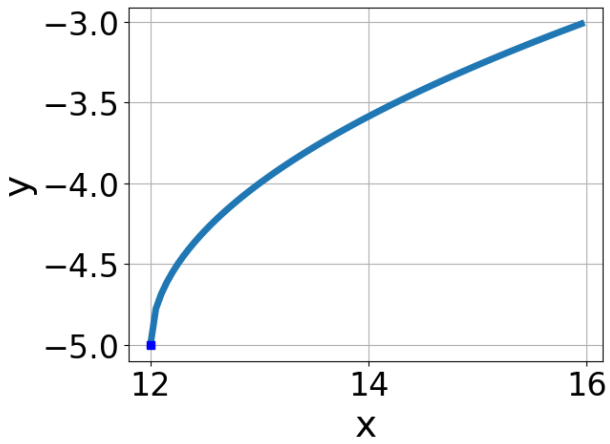
B. The domain is $(-\infty, a]$, where $a \in [0.5, 0.95]$

C. The domain is $(-\infty, a]$, where $a \in [1.23, 2.47]$

D. The domain is $[a, \infty)$, where $a \in [-0.9, 1.1]$

E. The domain is $[a, \infty)$, where $a \in [0.9, 2.8]$

21. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x-12} - 5$

B. $f(x) = \sqrt[3]{x-12} - 5$

C. $f(x) = -\sqrt[3]{x+12} - 5$

D. $f(x) = \sqrt[3]{x+12} - 5$

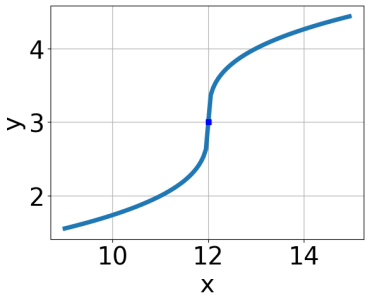
E. None of the above

---

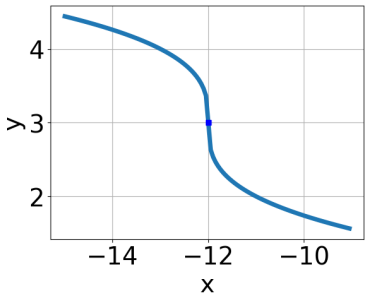
22. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x+12} + 3$$

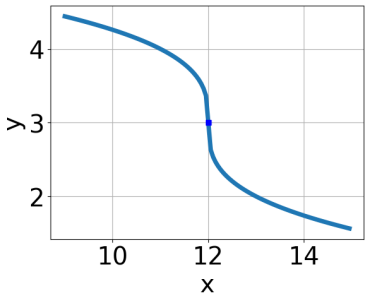
A.



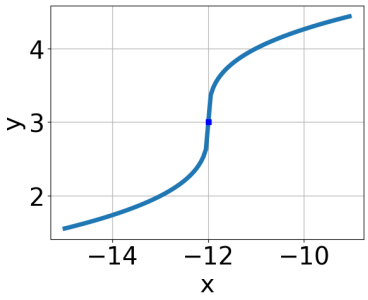
C.



B.



D.



E. None of the above.

---

23. What is the domain of the function below?

$$f(x) = \sqrt[4]{-4x - 5}$$

A. $[a, \infty)$, where $a \in [-2.36, -0.83]$

B. $(-\infty, \infty)$

C. $(-\infty, a]$, where $a \in [-0.93, -0.64]$

D. $(-\infty, a]$, where $a \in [-1.43, -0.91]$

E. $[a, \infty)$, where $a \in [-1.11, 1.51]$

---

24. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{12x^2 - 14} - \sqrt{38x} = 0$$

A. $x_1 \in [-0.29, 0.48]$ and $x_2 \in [3.5, 5.5]$

B. $x \in [-0.57, 0.19]$

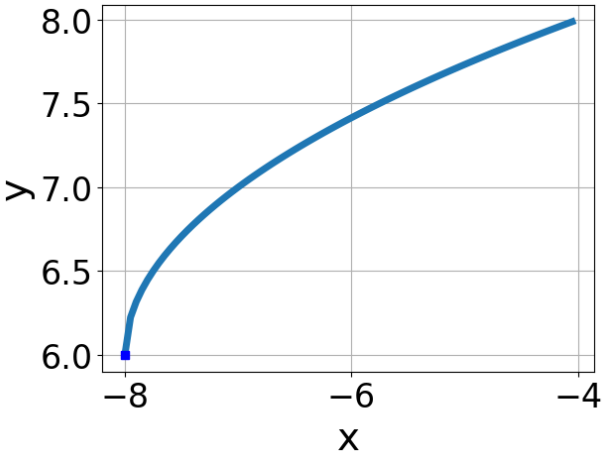
C. $x \in [2.68, 4.7]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [-0.57, 0.19]$ and $x_2 \in [3.5, 5.5]$

---

25. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x+8}+6$

B. $f(x) = -\sqrt{x-8}+6$

C. $f(x) = \sqrt{x-8}+6$

D. $f(x) = \sqrt{x+8}+6$

E. None of the above

---

26. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{5x-4} - \sqrt{-7x+9} = 0$$

A. $x_1 \in [0.78, 0.91]$ and $x_2 \in [1.25, 1.29]$

B. $x_1 \in [0.78, 0.91]$ and $x_2 \in [0.84, 1.12]$

C. $x \in [-0.61, -0.31]$

D. $x \in [0.97, 1.1]$

E. All solutions lead to invalid or complex values in the equation.

---

27. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-35x^2+36} - \sqrt{-43x} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x_1 \in [0, 1.05]$ and $x_2 \in [-0.2, 2.8]$

C. $x_1 \in [-1.1, -0.09]$ and $x_2 \in [-0.2, 2.8]$

D. $x \in [-1.1, -0.09]$

E. $x \in [1.33, 2.34]$

---

28. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-4x - 9} - \sqrt{-5x + 7} = 0$$

A. $x \in [15, 17]$

B. $x_1 \in [-7.25, 0.75]$ and $x_2 \in [15, 17]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [1, 4]$

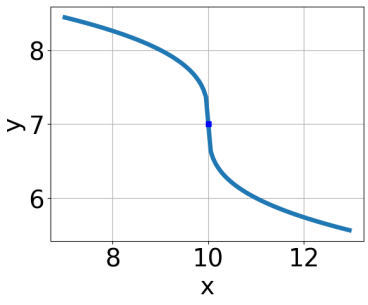
E. $x_1 \in [-7.25, 0.75]$ and $x_2 \in [0.4, 6.4]$

---

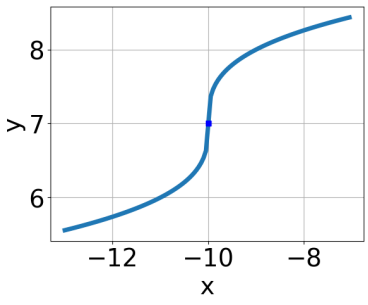
29. Choose the graph of the equation below.

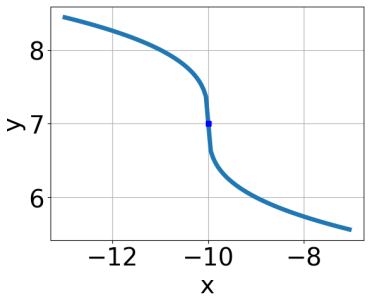
$$f(x) = -\sqrt[3]{x + 10} + 7$$

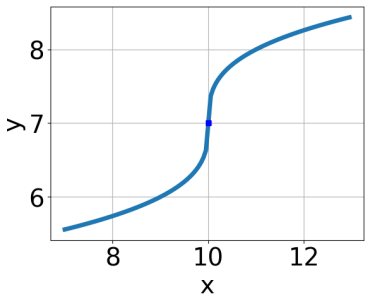
A.



B.



C. 

D. 

E. None of the above.

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30. What is the domain of the function below?

$$f(x) = \sqrt[4]{-6x - 5}$$

A. $[a, \infty)$, where $a \in [-0.85, -0.18]$

B. $(-\infty, \infty)$

C. $(-\infty, a]$, where $a \in [-1.94, -0.87]$

D. $[a, \infty)$, where $a \in [-1.76, -1.11]$

E. $(-\infty, a]$, where $a \in [-0.98, -0.42]$
